IN THE CLAIMS:

Please amend the heading of the claims as follows:

~~CLAIMS~~ WHAT IS CLAIMED IS:

Claim 1 (Currently Amended): A method for passage control of an unmanned mine vehicle, the method comprising:

limiting in a mine at least one predefined operation area [[(4)]] where one or more unmanned mine vehicles [[(2)]] operate; [[and]]

preventing unallowed access of the unmanned mine vehicle [[(2)]] to a manual area [[(10)]] limited outside the operation area [[(4)]], ~~characterized by~~

transferring the mine vehicle [[(2)]] from the operation area [[(4)]] to the manual area [[(10)]] or vice versa through at least one access station [[(8)]], the passage station [[(8)]] being arranged between the operation area [[(4)]] and the manual area [[(10)]];

performing the transfer of the mine vehicle [[(2)]] in the passage station [[(8)]] through a first access gate [[(9)]] and a second access gate [[(11)]] and further through an intermediate space [[(12)]] between the access gates [[(9, 11)]];

and, during the transfer of the mine vehicle [[(2)]], keeping at least one access gate [[(9, 11)]] closed at a time.

Claim 2 (Currently Amended): A method as claimed in claim 1, ~~characterized by~~ comprising

continuing the operations of the mine vehicles [[(2)]] in the operation area [[(4)]] uninterruptedly regardless of transfers of unmanned mine vehicles [[(2)]] in the passage station [[(8)]].

Claim 3 (Currently Amended): A method as claimed in claim 1 ~~or 2~~, ~~characterized by~~ comprising

driving the mine vehicle [[(2)]] unmanned from the operation area [[(4)]] to the intermediate space [[(12)]] and, correspondingly, from the intermediate space [[(12)]] to the operation area [[(4)]],

and driving the mine vehicle [[(2)]] manned from the intermediate space [[(12)]] to the manual area [[(10)]] and, correspondingly, from the manual area [[(10)]] to the intermediate space [[(12)]].

Claim 4 (Currently Amended): A method as claimed in ~~any one of the preceding claims~~ claim 1, ~~characterized by~~ comprising

detecting the approach of the mine vehicle [[(2)]] to the passage station [[(8)]] by means of at least one detection point [[(13)]].

Claim 5 (Currently Amended): A passage control system of a mine, the system comprising:

at least one operation area [[(4)]] for at least one unmanned mine vehicle [[(2)]];

at least one gate ~~(3a to 3m)~~ for preventing unallowed access of the unmanned mine vehicle [[(2)]] to a manual area [[(10)]] outside the operation area [[(4)]]; [[and]]

means for opening and closing the gates ~~(3a to 3m)~~ limiting free access of mine vehicles [[(2)]], ~~characterized in that~~

~~the system comprises~~ at least one access station [[(8)]], which is arranged between the operation area [[(4)]] and the manual area [[(10)]] and through which the mine vehicle is arranged to be transferred from the operation area [[(4)]] to the manual area [[(10)]] and vice versa;

and wherein

[[that]] the passage station [[(8)]] comprises two openable and closable access gates [[(9, 11)]] arranged successively at a distance from each other;

[[that]] the first access gate [[(9)]] is in the operation area side [[(4)]] and the second access gate [[(11)]] is in the manual area side [[(10)]];

[[that]] there is an intermediate space [[(12)]] between the first access gate [[(9)]] and the second access gate [[(11)]];

and [[that]] the passage control system is arranged to control the passage station [[(8)]] so that when the mine vehicle [[(2)]] is in the intermediate space [[(12)]], at least one access gate [[(9, 11)]] is closed.

Claim 6 (Currently Amended): A system as claimed in claim 5, ~~characterized in that~~ wherein

the operation of the passage station [[(8)]] is independent of the mine vehicles [[(2)]] operating in the operation area [[(4)]].

Claim 7 (Currently Amended): A system as claimed in claim 5 ~~or 6~~, ~~characterized in that~~ wherein

the mine vehicle [[(2)]] is arranged to be transferred unmanned from the operation area [[(4)]] to the intermediate space [[(12)]] and, correspondingly, from the intermediate space [[(12)]] to the operation area [[(4)]],

and [[that]] the mine vehicle [[(2)]] is arranged to be transferred manned from the intermediate space [[(12)]] to the manual area [[(10)]] and, correspondingly, from the manual area [[(10)]] to the intermediate space [[(12)]].

Claim 8 (Currently Amended): A system as claimed in ~~any one of claims 5 to 7~~ claim 5, ~~characterized in that~~ the system comprises at least one detection point [[(13, 14)]], which is arranged to detect the mine vehicle [[(2)]] approaching the access gate [[(9, 11)]] from the operation area [[(4)]].

Claim 9 (Currently Amended): A passage station for mine vehicles, the passage station [[(8)]] comprising at least one gate, which is arranged in a mine between an operation area [[(4)]] limited for unmanned mine vehicles [[(2)]] and a manual area [[(10)]] limited outside the operation area, and through which access station [[(8)]] the mine vehicle [[(2)]] is arranged to be transferred from the operation area [[(4)]] to the manual area [[(10)]] and vice versa, ~~characterized in that~~

and wherein

the passage station [[(8)]] comprises two openable and closable access gates [[(9, 11)]] arranged successively at a distance from each other;

[[that]] the first access gate [[(9)]] is in the operation area side [[(4)]] and the second access gate [[(11)]] is in the manual area side [[(10)]];

[[that]] between the first access gate [[(9)]] and the second access gate [[(11)]] there is an intermediate space [[(12)]], to which the mine vehicle [[(2)]] can be driven through an access gate [[(9, 11)]];

and [[that]] the passage station [[(8)]] comprises at least one control device, which is arranged to control the passage station [[(8)]] so that when the mine vehicle [[(2)]] is in the intermediate space [[(12)]], at least one access gate [[(9, 11)]] is closed.